

membrane forms; even this, if not excessive in degree, may be expectorated; and yet the disease not being fully broken, (by metastasis or otherwise,) falls on the lungs, inducing peripneumony; and if death ensues, no evidence of the primary disease may be apparent; the patients die with infarcted lungs or empyema, or fall into phthisis, whilst the original complaint is altogether overlooked. The numerous instances of membranes discharged under circumstances, (except from croup,) inexplicable, show that this disease, though known, was not adequately comprehended. The angina, (cynanche of Hippocrates,) can be elucidated only from our croup, or otherwise the Greeks must have had a disease unknown to us; for, excepting croup, no anginose affection conforms to the statements of Hippocrates relative to cynanche. *Inflammatio sine rubore vel tumore; Tussis, cum difficili respiratione*, approaching to strangulation, (*orthopnœa*), is unknown to the present race of physicians, excepting in croup. What is said will equally apply to all the records of medicine from Hippocrates down to the present period. All these writings more or less evince a knowledge of croup, although its pathology was not understood till lately. The former views of asthma, as a generic term, embracing almost every variety of difficult respiration; infantile asthma, formerly so common, but now unknown, can only be fully explained by croup. Ulceration or imposthume in the trachea, to us unknown, receives a full explanation by our knowledge of croup. Worms and polypi discharged from the lungs, all were probably concretions of a croupy character, but which an erroneous pathology has transmitted to us. And although I shall not pretend to affirm that *all* I have quoted is absolutely demonstrative of croup; yet I apprehend enough exists after making all due allowance, to prove that the disease in question is as old as our first authorities; and as Hippocrates refers to those who preceded him, it is equally probable, that as like causes are always followed by similar effects in the animal economy, they likewise were acquainted with the disease.

ART. IX. *Two Cases illustrative of the Pathology of the Nervous System.* By WILLIAM E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.

THE precision with which the symptoms of disease during life, indicate the organic lesions going on within the body, is frequently so strikingly illustrated upon dissection after death, that the physician

is ready to rank his as an exact science. A dream so gratifying is, however, scarcely excited when additional experience dispels it, and leaves the votary of medicine still to deplore the imperfections of his art. The two following cases will serve to show the correctness of these observations. In the first it appeared as if each organic derangement was immediately indicated by its appropriate symptom, and thereby communicated to the practitioner in language not to be misunderstood. In the other the ordinary sympathies and alliances of the system seemed to be quite as completely asleep, or so obscure as to render it next to impossible to detect what was going on internally.

CASE I. Pulmonary Consumption with Arachnitis of the Brain and Spinal Marrow.—N. M. a black girl, aged twenty, a domestic in the family of a merchant of this city, was taken unwell about the middle of July, 1827. The symptoms which appeared were a dry husky skin, with not much heat in it; pulse frequent; difficulty of breathing on ascending a flight of stairs; slight head-ache; no appetite; bowels regular; menstruation regular up to the last period; tongue indicating no derangement in the viscera of digestion; a sound of the thorax somewhat flattened on percussion on the right side under the clavicle.

I directed her a diurnal diet consisting in milk one pint, mixed with water one pint, and bread four ounces, which was continued for one month, with an evident improvement in the symptoms; for she became stronger; the expression of countenance was better, and her breathing easier. I observed, however, the frequency of pulse to continue; it was seldom less than 140, and generally 160 in the minute. As she was extremely diffident, I often charged her with being agitated, but this she denied. There being, however, no local pain, except in the head and that slight, I must confess that notwithstanding her assertions, I attributed much to agitation.

The symptoms seemed at the expiration of the month to have worn away so completely, with the exception of the state of pulse, that I gave her permission to live more freely, indeed almost as usual, and discontinued my visits. The only medicinal application during this month was a blister upon the upper front part of the chest, which was kept open for some days.

I saw nothing of her afterwards till about the middle of September, and supposed her well; I was then informed to the contrary; and as in consequence of a newspaper paragraph, the tea of liverwort had begun to excite considerable attention for pulmonary affections, her mistress desired its exhibition in her case. This was conceded, and

persevered in for fifteen or twenty days, without the slightest benefit, except that she thought her head relieved by it. About the close of the administration of this remedy, her stomach became exceedingly disordered, and rejected every thing for a day or two, when its extreme irritability ceased, but with an entire loss of appetite.

October 15th, 1827.—At this period the symptoms are, one eye turned from its axis, squinting, double vision; articulation rather slow; does not complain of pain in the head; pulse one hundred and sixty; respiration rather easy and tranquil; no pain in thorax. Percussion beneath the right clavicle, yields a heavy fleshy sound. On the application of stethoscope no respiration heard there, but it is heard in other parts of the same lung. Sound and respiration of right lung good. No complaint of abdomen. Loss of appetite. I directed the renewal of the blister to the thorax, and ordered tinct. benz. comp. gtt. xxx. three times a day.

A few days after this she became incapable of discharging her urine; the bladder distended and produced the excessive pain, attending that state. Her articulation was broken by sobs and cries, with stuttering and thick speech. The lower extremities became motionless, though extremely painful when touched or moved abruptly; and the other symptoms of cerebral disease increased. The bladder was relieved of a pint and a half of very foetid urine by the catheter, to which instrument I resorted every day afterwards so long as she lived, from the incapability of discharging the urine still continuing, attended with pain and extreme febrile. For two days before death she became comatose, like one under the influence of laudanum, and died, November 4th, 1827, by a very gradual and easy extinction of life.

I examined her twenty-five hours after death, in company with Dr. MEIGS, stating to him previously that I had experienced much difficulty in satisfying myself, on the diagnostics of the disease. That I felt assured, from percussion and auscultation, that the right lung under the clavicle was carnified, as in consumption; but that she never had any thing like night sweats from the beginning to the end of her sickness, no local pain, no cough of any constancy, and no expectoration. The symptoms in fact of hectic fever had never been evolved; latterly she had on two or three occasions spit up a very trifling quantity of matter resembling a softened tubercle, but this was all. I also told the doctor, that to account for the symptoms, we, on the principles of physiological medicine ought to find the brain about the corpora striata and thalami softened or diseased, and also the medulla spinalis in the same way.

Autopsy.—Middle atrophy; with a very tranquil expression of face; frame well developed.

Head. Dura mater presented the appearance of being half dried on top of hemispheres. Pia mater congested with red blood. Arachnoidea at basis of brain much thickened by coagulating lymph, identified with its structure; this was more eminently the case about the chiasm of the optic nerves and the inferior part of the third ventricle. The ventricles contained about one ounce of serum; the fornix was in a pulpy, soft state, and the septum lucidum was stretched and resolved here and there into fasciculi of fibres, forming a very imperfect partition between the ventricles. The arachnoidea of ventricles not obviously thickened. Corpora striata softened. An inflammatory adhesion injected with red blood and cylindrical, caused the thalami to adhere; possibly this adhesion might have been the commissura mollis, but if so, it was lower down and further forward than usual, and much stronger. Substance of brain showed numerous red points of cut vessels. Nothing remarkable about cerebellum, pons and medulla oblongata; except that wherever the arachnoidea stretched from eminence to eminence it was thickened and inflamed.

Medulla spinalis. Dura mater natural; tunica arachnoidea inflamed in its whole length and thickened, adhering very closely to pia mater, and to the roots of the spinal nerves. Texture of medulla softer at places than natural.

Thorax. Right lung carnified in its upper lobe, and adhering to the thorax where it gave out the flattened sound; raw tubercles in great abundance through its structure, but none of them softened; permeable imperfectly to air in its two lower lobes. Left lung permeable every where, but abounding in immature tubercles from a line to three in diameter; none of them softened. Heart natural.

Abdomen. Liver healthy, with the exception of a few tubercular masses interspersed in it. Stomach contained a thin, dark-coloured fluid, smelling disagreeably; mucous coat somewhat browned, and the lymphatic glands along its lesser curvature, and in lesser omentum, enlarged and tuberculous; some of them were seen in the thickness of the stomach, along its lesser curvature, from one to two lines broad. Intestines generally healthy; at least the marks of disease were not evident, with the exception of a light slate-colour at their upper part in the mucous coat. Organs of generation generally healthy; the internal coat of uterus injected with blood, and could be raised easily with the point of a knife.

By an oversight I neglected to look at the mucous coat of the ileocolic junction, and at that of the bladder, which latter organ, at the time

of death, contained some of the dreadfully foetid urine, a little of which escaping by pressure made the room almost intolerable to us.

I consider this case to have been one of the most satisfactory for elucidating the location of disease by the lesion of function, or in other words, for illustrating physiological medicine. Without the squinting, and without the paralysis of the bladder, it would have been very difficult to ascertain what was going on in the brain and spinal marrow.

CASE II. *Ramollissement of Hemispheres of Cerebrum.*—Samuel Waggoner, aged sixteen, a resident of Bellefonte, Centre county, Pennsylvania, received at harvest-time, 1827, a slight blow at the internal canthus of the left eye, from the finger of a boy, who was trying to knock off his hat. In a short time afterwards a tumour began to show itself at the part, and which, in its progress pushed the eye-ball upwards and outwards, and destroyed its vision. Last winter he was brought to the Pennsylvania Eye Infirmary, and consigned to the professional care of Dr. ISAAC HAYS. As he could not be accommodated in that institution, he was transferred to the Alms-house, and put under the charge of Dr. GIBSON, who, on December 19th, 1827, in the presence of the clinical class, extirpated the tumour, and along with it the eye-ball. In this operation all the contents of the orbit were removed, and a part of the inferior margin of the orbit, which was in a softened, ulcerated state.

The tumour was spheroidal, from two to two and a half inches in diameter; was semi-transparent, traversed by small ligamentous fibres, and had the consistence of thick glue when permitted to cool after being boiled. It was principally albuminous as it coagulated and became opaque on immersion in spt. wine. I did not see Waggoner afterwards till May 1st, when the surgical wards of the house devolved upon me in the usual routine of business. The tumour had in the mean time resumed its growth, had swollen enormously that side of the face, resembled in structure the first one, and was subject to occasional bleeding. It was a flattened oval of five inches in diameter, and had a fungous appearance. It filled up the orbit, had either displaced or removed the whole anterior parietes of the upper jaw, as well as of the side of the nose, and also occupied the antrum, and had shoved downwards the left corner of the mouth.

The patient at this time, as might be expected, was weakened and emaciated; his appetite was indifferent. He however took his exercise daily by walking in the ward, or in the court; his intellects were good, not obviously impaired, and neither were his senses.

He was sometimes sprightly when he could withdraw his reflections, from his horrible condition. Considering his case hopeless, I prescribed for two or three weeks, only common cerate dressing; and black drop at night.

In the mean time the discharge from the tumour became so offensive, that to correct it, I directed it to be washed once or twice daily with pyroligneous acid. Persisting in this application for a week, I was struck in the progress of it with the tendency of the tumour to slough. It encouraged me to keep on with the acid, and the tumour, still diminishing in size, by the detachment continually of large sloughs, I had at length the pleasure of seeing almost the whole of the tumour, with the exception of some deep-seated parts, of but small thickness, entirely removed; and what was quite as unexpected, even the edges of the skin began to cicatrize. The falling off of the tumour left a frightful excavation in the place of the upper jaw, one side of which exposed the left nostril in its whole length, the septum being seen from anterior to posterior margin.

In the progress of the tumour and of its sloughing, Waggoner had pain in the face, and also in the forehead, especially the left; and this pain continued with remissions till his death, which occurred June 19th, 1828, at nine o'clock, A. M. *Till the day before his death he took his exercise as usual.* On no occasion had he a symptom of paralysis, partial or general, nor of convulsion, nor interruption to his urine. His senses were perfect, and also his intelligence. In my attendance, I often directed such questions as might inform me of derangement of cerebral structure, if any existed, and invariably the replies only alluded to the pain in his forehead. The evening before his death he vomited freely, and threw up some bilious matter. The want of cerebral symptoms, the sloughing of the tumour, and the favourable time of his life, excited some conjectures on his possible recovery.

Autopsy, twenty-seven hours after death.—Head. The centre of the anterior left lobe of the brain was resolved into a soft putrilage equivalent to about three-fourths of the whole lobe. The periphery of the lobe enveloped this mass; the bottom of the lobe was not more than two lines in thickness at most points, and at one point it was perforated by the ramollissement, and led to an ulceration of the orbital process of the frontis, communicating with the cavity of the orbit. The parietes of the ramollissement were six or eight lines thick above. The whole corpus striatum of that side was dissolved, and the ramollissement consequently invaded the parietes of the left lateral ventricle.

About one-third of the right anterior lobe, bordering upon the anterior margin of the corpus callosum, was also dissolved in the same way, and about one-half of the corpus striatum of that side. Adhesion of the pia mater of an inflammatory kind, existed between the flat sides of the anterior lobes, and thereby the ramollissement of the two lobes formed a common mass. The whole of the fornix and of the septum lucidum, and a thin lamina of the under surface of the corpus callosum were dissolved. The entire cerebrum was several degrees below the common consistence, both in the cortical and medullary substance. The cortical covering of the convolutions over the anterior two-thirds of the cerebrum was of a light pea-green colour, the remainder was of the natural colour.

The putrilage or ramollissement consisted in bits of cerebral matter, mixed with serum and red blood, its boundaries were not well defined. In the centre of the mass it was diffuent, and became as it receded from the centre, less and less so, until it blended insensibly with the surrounding cerebral matter.

The cerebellum was sound.

The arachnoidea of the whole base of the brain was thickened and opaque, and in that state surrounded the nerves of the base: on the under surface of the cerebellum, of the pons varolii, and of the medulla oblongata, it was not only thickened and opaque, but had a coating of purulent coagulated lymph.

The red inflammation of the pia mater was very conspicuous, where the ramollissement of the two anterior lobes coalesced, and on the under surface of the left lobe where its periphery was so thin. At the latter spot the dura mater was ulcerated through to the extent of twelve lines or more in diameter.

Beneath the ulceration of the dura mater, at the side of the left ethmoidal gutter, was the ulceration just alluded to, of the orbital process of the os frontis, equal in extent to the hole in the dura mater. It was not, however, a single hole in the bone, but several of different sizes, giving it a riddled appearance, and forming a communication between the cavity of the orbit and of the cranium. I am not certain whether any part of the dissolved brain actually found its way before death into the orbit through these holes; there was, however, no impediment, unless it might arise from their being rather too small. There is no doubt that a probe might have been passed from the orbit into the very centre of the ramollissement, if the communication had been suspected before death.

The thorax was perfectly sound, and no disease was observable in the abdomen. The bladder was distended with urine.

The medulla spinalis and its membranes were perfectly sound. I was struck with the facility, with which the medulla spinalis, after its membranes were peeled off, could be divided from one end to the other into an indefinite number of strings or cords, running parallel with one another, like the fibres of a piece of white oak. I imagine that this test will be found to prove its healthiness, when there is a doubt of its being too hard or too soft.

The remarks upon this case are, 1st, that no satisfactory date can be assigned for the commencement of the softening, or its cause. I am induced to consider it as a consequence of the tumour of the orbit, whose development after the operation caused the absorption of the orbital process of the os frontis, and irritation of the adjacent part of the brain, and of its membranes.

2d. It is surprising that such cerebral disorganization was followed, neither by suspension or derangement of intellect, of the senses, nor of motility.

3d. That the tumour should have sloughed so completely away under the application of pyroligneous acid. Does not this indicate some unknown power in it over such tumours well worthy of further inquiry and experiment?

4th. The second progress of the tumour reduced the cavity of the antrum, of the orbit, and of the left nostril, into one large excavation, the whole periphery of which was exposed at the time of death. This tumour, though it shoved the bones opposed to it out of their places, and caused them to drop off, as for example, all the exterior side of the left nostril, and the parietes of the antrum above and in front, as well as the left os nasi, and nasal process of os frontis; did yet secrete patches of bone in its own thickness, and formed for itself an imperfect shell at the back and external side of the antrum, perhaps by the distention of the latter. The septum narium did not give way, but was pushed over to the right side as far as it could go.

ART. X. *Case of Organic Disease of the Brain.* By JOHN WARE, M. D. of Boston.

THE subject of this case was a lad aged nearly ten years, who had usually enjoyed good health, and had never been liable to pain, or any other symptom affecting the head. Previously to my seeing him, he had for some time complained of pains in the head, which came on